2015

Electro-Optic Detection in Littoral for MIW/ASW Using Navys EODES Model and Glider-Measured Optic Data

Chu, Peter C.

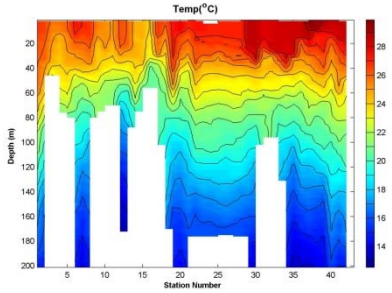
Electro-Optic Detection in Littoral for MIW/ASW Using Navy's EODES Model and Optic Data FY16-FY17

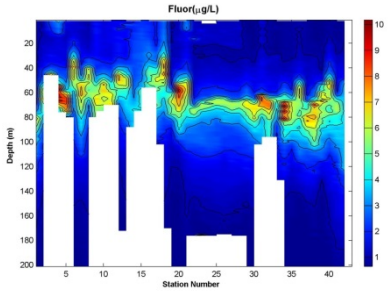
Peter C. Chu
Naval Postgraduate School

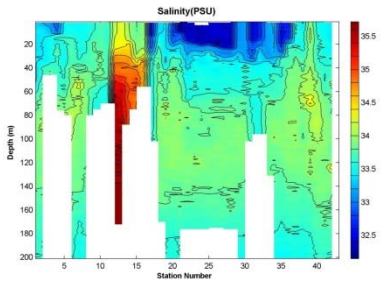
Objectives

- Enhancement of optical detection systems to get around the obvious limitations of current acoustic detection systems especially increased fleet and port security in noisy littoral waters.

Relationship between hydrographic and optical parameters in Persian Gulf







Technical Approach

- **Analyze the temperature, salinity, chlorophyll, and optical data collected by the Naval Oceanographic Office**
- **Assess the underwater optical transmission loss**
- **Identify the salinity and chlorophyll effect on the underwater optical propagation**
- **Implement the Navy 's EODES model for the East Asian Marginal Seas such as the Yellow Sea, East China Sea, and South China Sea.**

Accomplishments – 4 NPS Theses Completed

Ross F. Hammerer, Environmental Effects on Underwater Optical Transmission in the Arabian Gulf and the Gulf of Oman. MS in PO, March 2016

Alexander J. Cullen, Environmental Effects on Underwater Optical Transmission in the Adriatic. MS in METOC, June 2016

Brian Breshears, Underwater Optical Transmission in the East Asian Marginal Seas for Warfare Operations. MS in METOC, June 2016

DyAnna Rodriguez, Interannual Variability of the California Current System and Optical Characteristics from Prolonged Data. MS in METOC, June 2016

September 2016